



ABSTRACT OF THE DISCLOSURE

In a method of manufacturing a vertical MOS transistor, a body region, a trench, a gate oxide film, a gate electrode, a source region, and a body contact region are successively formed in a semiconductor substrate. An intermediate insulating film is deposited over a main surface of the semiconductor substrate and the gate electrode. The intermediate insulating film overlying the main surface of the semiconductor substrate is then etched back so as to entirely expose the source region and the body contact region. A source metal electrode is formed over the main surface of the semiconductor substrate so as to cover the source region and body contact region.